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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,124	01/03/2005	Kazuo Higuchi	040894-7160	9680

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EXAMINER
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CHUKWURAH, NATHANIEL C

ART UNIT	PAPER NUMBER
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3721

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/520,124

Applicant(s)

HIGUCHI, KAZUO

Examiner

Nathaniel C. Chukwurah

Art Unit

3721

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,7,9,10 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 2,5,8 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. The office action is in response to the amendment filed on 5/3/2006.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kurosawa (US 4,623,082).

With regard to claim 1, Kurosawa discloses a staple remaining amount detecting apparatus (PT2) in an electric stapler (1), comprising a staple cartridge (2) provided attachably and detachably to and from a magazine portion (8) of a stapler main body (3) for containing sheet-like staples (25) each constituted by connecting a number of staples in a straight form in a sheet-like shape in a stacked state, wherein the staples are guided out to outside of an opening portion of a lower end portion of a front wall of the cartridge (2) main body successively from a lower end portion of the sheet-like staples (25), comprising: an engaging plate (26) arranged at an upper portion of the cartridge (2) main body and engaged with the sheet-like staple (25) at a topmost portion; and a position detecting mechanism (photosensor PT2) provided on an inner side or an outer side of the cartridge (2) main body capable of detecting a position of the engaging plate (26), wherein a remaining amount of the sheet-like staples is detected based on detection of the position of the engaging plate by the position detecting mechanism (PT2).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-4, 6-7, 9-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurosawa.

With regard to claim 3 and to extent understood, the position detecting mechanism (PT2 photosensor) of Kurosawa comprises a portion of transmitting and a portion of reflecting light (col. 10, lines 11-12), wherein the engaging plate is provided with an optical sensor.

The staple apparatus of discloses all claimed subject matter but lacks specific teaching of cutting off light irradiated to the portion of transmitting and the portion of reflecting light, and the remaining amount of the sheet-like staples is detected based on the detection of the position of the engaging plate (26).

Examiner Takes Official Notice that photosensor irradiating light and cutting off is well known in the art and would have been obvious to one skilled in the art for accurate detection of the staples.

With regard to claim 4, Kurosawa discloses a staple remaining amount detecting apparatus (PT2) in an electric stapler (1), used in an electric stapler comprising a staple cartridge (2) provided attachably and detachably to and from a magazine portion (8) of a stapler main body (3) for containing a number of staples (25) each in a straight form, wherein the staples are successively guided out to outside of an opening portion of the cartridge (2) main body from the

Art Unit: 3721

staple at a front end portion, comprising: an engaging plate (26) arranged at an upper portion of the cartridge (2) main body; and a position detecting mechanism (photosensor PT2) provided on an inner side or an outer side of the cartridge (2) main body capable of detecting a position of the engaging plate (26); wherein a remaining amount of the sheet-like staples (25) is detected based on detection of the position by the detecting mechanism (PT2).

Kurosawa discloses all claimed subject matter but lacks specific teaching staples wound in a roll-like shape. However, since the use of rolled staples are well known in the art, it would have been obvious to one skilled in the art to arrange the sheet formed staples in roll-like form for easy disposal from the cartridge to the stapling position.

With regard to claim 6 and to the extent understood, the position detecting mechanism (PT2 photosensor) of Kurosawa comprises a portion of transmitting and a portion of reflecting light (col. 10, lines 11-12), the engaging plate can be provided with an optical sensor.

The reference staple apparatus of Kurosawa discloses all claimed subject matter but lacks specific teaching of cutting off light irradiated to the portion of transmitting and the portion of reflecting light, and the remaining amount of the roll-like staples detected based on detection of the position of the engaging plate.

Kurosawa discloses all claimed subject matter but lacks specific teaching staples wound in a roll-like shape. However, since the use of rolled staples are well known in the art, it would have been obvious to one skilled in the art to arrange the sheet formed staples in roll-like form for easy disposal from the cartridge to the stapling position.

Examiner Takes Official Notice that photosensor irradiating light and cutting off is well known in the art and would have been obvious to one skilled in the art to provide the staple

Art Unit: 3721

device of Kurosawa with function of irradiating light and cutting off for accurate detection of the staples.

With regard to claim 7, the detecting mechanism is capable of providing electric signal based on the detection of the position of a projected portion of the engaging plate (26a).

With regard to claim 9 and to extent understood, the position detecting mechanism (PT2 photosensor) of Kurosawa comprises a portion of transmitting and a portion of reflecting light (col. 10, lines 11-12), wherein the engaging plate is provided with an optical sensor.

The staple apparatus of discloses all claimed subject matter but lacks specific teaching of cutting off light irradiated to the portion of transmitting and the portion of reflecting light, and the remaining amount of the sheet-like staples is detected based on the detection of the position of the engaging plate (26).

Examiner Takes Official Notice that photosensor irradiating light and cutting off is well known in the art and would have been obvious to one skilled in the art for accurate detection of the staples.

With regard to claim 10, the detecting mechanism is capable of providing electric signal based on the detection of the position of a projected portion of the engaging plate (26a).

With regard to claim 12 and to the extent understood, the position detecting mechanism (PT2 photosensor) of Kurosawa comprises a portion of transmitting and a portion of reflecting light (col. 10, lines 11-12), the engaging plate can be provided with an optical sensor.

The reference staple apparatus of Kurosawa discloses all claimed subject matter but lacks specific teaching of cutting off light irradiated to the portion of transmitting and the portion of

Art Unit: 3721

reflecting light, and the remaining amount of the roll-like staples detected based on detection of the position of the engaging plate.

Kurosawa discloses all claimed subject matter but lacks specific teaching staples wound in a roll-like shape. However, since the use of rolled staples are well known in the art, it would have been obvious to one skilled in the art to arrange the sheet formed staples in roll-like form for easy disposal from the cartridge to the stapling position.

Examiner Takes Official Notice that photosensor irradiating light and cutting off is well known in the art and would have been obvious to one skilled in the art to provide the staple device of Kurosawa with function of irradiating light and cutting off for accurate detection of the staples.

With regard to claims 13 and 14, the reference staple apparatus of Kurosawa does expressly state about at least three position of the engaging plate, however, the detecting mechanism is capable of such function as detecting at least three position of the engaging plate (26).

***Allowable Subject Matter***

6. Claims 2, 5, 8 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The most pertinent prior art, Kurosawa discloses a staple detecting apparatus comprising: a staple cartridge, a magazine, a sheet-like staples, an engaging plate, a position detecting mechanism but does not disclose the position detecting mechanism comprising a plurality of

Art Unit: 3721

conductors and out terminal provided at each of the conductors, wherein an engaging plate provided with an electrode and in contact with the conductors, move along the conductors in order to detect remaining staples.

***Response to Arguments***

7. Applicant's arguments filed 5/3/2006 have been fully considered but they are not persuasive.

With respect to claim 1, applicant argues that the reference of Kurosawa does not teach at least detection of “ a position engaging plate....”.

The examiner contends that Kurosawa reference does teach at least detection of “ a position engaging plate” See column 10, lines 1-14 for example.

Applicant argues that the reference of Kurosawa does not disclose “cutting off light irradiated to the portion of transmitting and portion of reflecting light, and the remaining amount of the sheet-like staple is detected based on the detection of the position.

The examiner contends the while the reference of Kurosawa does not expressly state cutting off light irradiated to the portion of transmitting and portion of reflecting light, the reference staple apparatus of Kurosawa is capable of such function with optical beam of the photosensor (PT2 and PT3) since cutting off light irradiated to the portion of transmitting and portion of reflecting light is also well known in the art, for example laser light.

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



Art Unit: 3721

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathaniel C. Chukwurah whose telephone number is (571) 272-4457. The examiner can normally be reached on M-F 6:00AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on (571) 272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NC

June 30, 2006.



Rinaldi I. Rada  
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Group 3700